Registration No: | | | | | | | | | | |

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M.TECH
P1PGCC02

1st Semester Regular Examination 2016-17
Internet of Things
BRANCH: ALL BRANCHES
Time: 3 Hours
Max Marks: 100
Q.CODE: Y923
Answer Question No.1 which is compulsory and any FOUR from the rest.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions: ***Short answer type*** **(2 x 10)**

a) Define IoT & its Characteristics?
b) What are the difference between machines in M2M and Things in IoT?
c) How do data collection and analysis approaches differ in M2M and IoT?
d) What is web service? What are different types of web services used in IOT?
e) Differentiate between physical entity and virtual entity in IoT system?
f) What do you mean by data visualization? Explain it
g) Define Mesh topology with example?
h) What is the controller service in weather monitoring system?
i) What is big-data and why we are using big-data in IOT?
j) Differentiate between 6LOWPAN and IEEE 802.15.4-LR WPAN?

Q2 **a)** What are the different layers of IoT protocols? Explain functions of all the layers? **(10)**
b) What are the different communication models of IoT? Explain publish-subscribe communication model &request-response communication model? **(10)**

Q3 **a)** Describe NFV architecture &explain how it can be used for virtualizing IoT devices? **(10)**
b) What do you mean by data mining? Explain its functionalities? **(10)**

Q4 **a)** Explain industry 4.0 concept? **(10)**
b) Describe the difference between IoT and M2M with example? **(10)**

Q5 **a)** What is an IoT device? Explain the basic building blocks of IoT device with diagram? Write python program for controlling an LED with a switch? **(10)**
b) Explain different steps of IoT system design methodology with their functions taking home automation system example? **(10)**

Q6 **a)** Write down overview of RFID? **(10)**
b) Describe SDN architecture & layers? **(10)**

Q7 Write short notes on: **(5x4)**

a) Open flow switch
b) Overview of android
c) Bluetooth Low Energy(BLE)
d) Cloud computing
e) Level-5 IOT system with diagram